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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,562	03/28/2005	Won-Seok Kang	22104.29047	9148
26781	7590	05/30/2008		
BROUSE MCDOWELL LPA 388 SOUTH MAIN STREET SUITE 500 AKRON, OH 44311			EXAMINER CECIL, TERRY K	
			ART UNIT 1797	PAPER NUMBER
			NOTIFICATION DATE 05/30/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

iplaw@brouse.com

Office Action Summary	Application No. 10/529,562	Applicant(s) KANG ET AL.	
	Examiner Mr. Terry K. Cecil	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112-first paragraph

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 3-4 are rejected under 35 U.S.C. 112, *first* paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. In applicant's invention, the pressure of the raw water acts to close the valve body of the *first* connector which is connected to the filter inlet. However, since the second connector is connected to the filter outlet, the pressure of the raw water does NOT act to close the valve body of the *second* connector since flow from the filter outlet is in the opposite direction. This limitation in each of claims 3-4 is not supported by the specification as originally filed and is considered to be new matter.

Claim Rejections - 35 USC § 112-second paragraph

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 3-4 and 7-8 are rejected under 35 U.S.C. 112, *second* paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are indefinite for the following reasons:

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- The following terms lack antecedent bases: “the inner circumference” (claim 1, second to the last line).
- In claims 3 and 4, requiring the valve bodies to be adapted to close by the pressure of the raw water introduced through the water inlet passageway is unclear and seems to mis-describe the invention. For examination purposes, the limitation applies only to the first connect that is connected to the filter inlet.
- Claims 3-4 and 7-8 are rejected since they suffer the same defects as the claims from which they depend.

Claim Objections

5. Claim 1 is objected to because of the following:

- Line 6 should state “each of said first and second connector ports having...”
- Line 11, " a respective valve body movable fitted into each valve chamber...”
- Line 16, “respective pushers for causing the valve bodies...”

Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

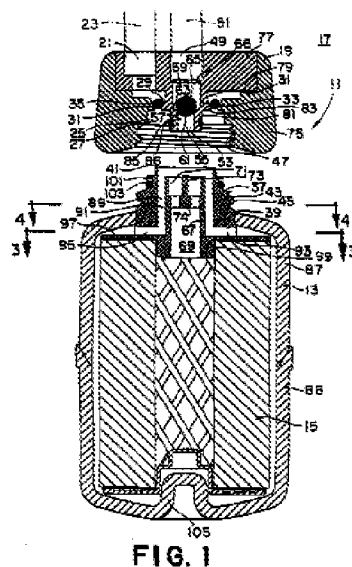
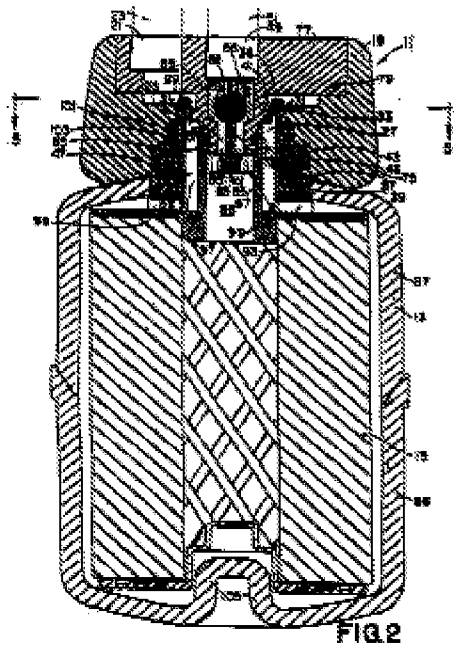
U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1 and 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Williams (U.S. 5,695,168) in view of Higashijima et al. (U.S. 5,397,462) and Stankowski et al.

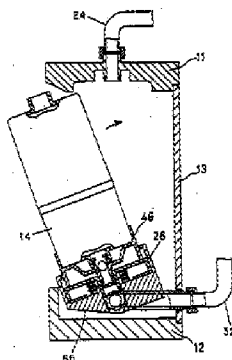
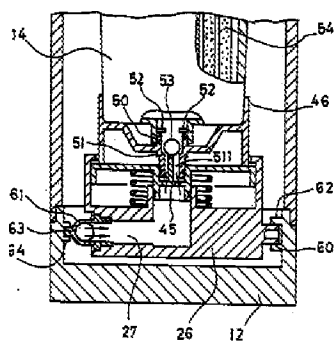
(U.S. 6,652,749).



As can be readily seen in figures 1 and 2 produced above, Williams teaches the limitations of the aforementioned claims including each of the inlet and outlet ports of the connector including a ball valve body that is opened

by a respective pusher of the filter [as in claim 1]. Williams doesn't teach the connector being swingable about a pivot axis between a filter service position and a filter replacement position.

But such is taught by Higashijima.



Higashijima teaches a connector 65 that pivots to a service position [as in claim 1]. It is considered that it would have been obvious

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to one ordinarily skilled in the art at the time of the invention to have the connector of Williams to be pivotable as in Higashijima since such would make filter replacement easier.

Williams doesn't teach the inner circumference of the valve chambers to include a plurality of water flow grooves. But such is taught by Stankowski.

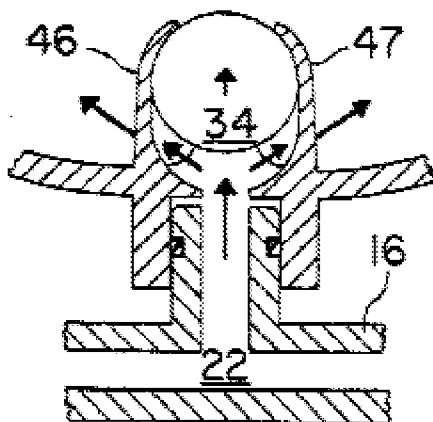


FIG. 4a

Stankowski teaches grooves (between the arms 46, 47) on the inner circumference of a valve chamber.

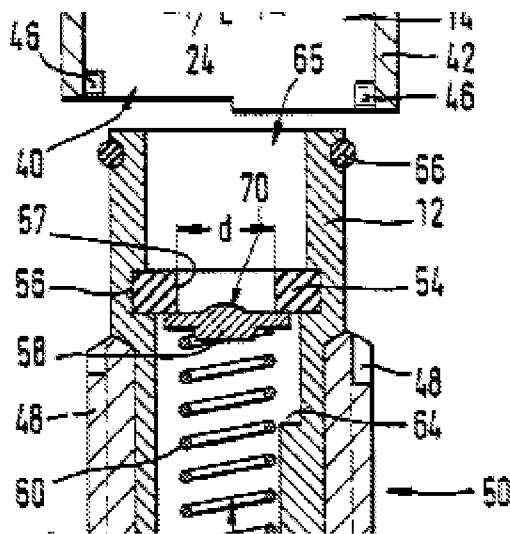
In the figure, the grooves are shown traversed by the flow arrows [as in claim 1]. It is considered that it would have been obvious to the skilled man to have the groove of Stankowski in the valve chambers of the modified Williams, since Stankowski teaches the benefit of allowing flow through the passage while

retaining the valve ball therein. As for claim 3, the valve of Williams is a ball closed by the pressure of the incoming raw water. As for claim 4, Stankowski teaches a poppet valve (figure 2) including a projecting rod 30 contactable with a pusher 29. It is considered that it would have been obvious to one ordinarily skilled in the art at the time of the invention to have the poppet valve of Stankowski as the ball valve of Williams, since such is merely simple substitution of a prior art element for performing the same function (stopping flow when a filter is removed).

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8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams, as modified by above and in further view of either Regunathan et al. (U.S. 4,645,601) or Niermeyer et al. (U.S. 6,068,770). Both Regunathan and Niermeyer teach a third filter port and corresponding connector port. It is considered that it would have been obvious to one ordinarily skilled in the art at the time of the invention to have the filter system of Williams, as modified above, to have three ports as in either of the aforementioned prior art, since such would provide the benefit of adaptability to ultrafiltration or reverse osmosis filtration requiring a concentrate line. Such filtration has the known benefit of producing higher filtrate purity.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams, as modified in section 7 above, and in further view of Mathieu (U.S. 4,745,950).



Mathieu teaches a spring ring 54 for retaining a valve in a valve chamber [as in claim 8]. It is considered that it would have been obvious to have the spring ring 54 in each of the valve chambers of the modified Williams, since such would provide the benefit of a sealing valve seat that is also removable for

repair/replacement of the valve body.

Response to Arguments

10. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Terry K. Cecil whose telephone number is (571) 272-1138. The examiner can normally be reached on 8:00a-4:30p M-F..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mr. Terry K. Cecil/
Primary Examiner, Art Unit 1797

TKC